SANTA CRUZ BIOTECHNOLOGY, INC.

Clb5 (Y-140): sc-20170

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Cell cycle progression is controlled at a point late in G_1 designated Start. Passage through Start requires the activity of the cyclin-dependent protein kinase Cdc28. Transition from G_1 to S phase requires the association of Cdc28 with members of the G_1 cyclin family, including Cln1, Cln2 and Cln3 (also designated Daf1 or Whi1). The G_2 to M phase requires the M phase cyclins, Clb1 (also designated Scb1) and Clb2, as well as the G_2 cyclins, Clb3 and Clb4. The S phase cyclins Clb5 and Clb6 coordinate DNA replication with cytokinesis. Expression of the cyclins is controlled by Ubc9 and Cdc34 (also designated Ubc3 or Dna6) via ubiquitin-mediated proteolysis.

REFERENCES

1. Nasmyth, K. 1993. Control of the yeast cell cycle by the Cdc28 protein kinase. Curr. Opinion Cell Biol. 5: 166-179.
2. Sherlock, G. and Rosamond, J. 1993. Starting to cycle: G_1 controls regulating cell division in budding yeast. J. Gen. Microbiol. 139: 2531-2541.
3. Amon, A., Tyers, M., Futcher, B. and Nasmyth, K. 1993. Mechanisms that help the yeast cell cycle clock tick: G_2 cyclins transcriptionally activate G_2 cyclins and repress G_1 cyclins. Cell 74: 993-1007.
4. Basco, R.D., Segal, M.D. and Reed., S.I. 1995. Negative regulation of G_1 and G_2 by S-phase cyclins of *Saccharomyces cerevisiae*. Mol. Cell. Biol. 15: 5030-5042.
5. Seufert, W., Futcher, B. and Jentsch, S. 1995. Role of a ubiquitin-conjugating enzyme in degradation of S- and M-phase cyclins. Nature 373: 78-81.
6. Prendergast, J.A., Ptak, C., Arnason, T.G. and Ellison, M.J. 1995. Increased ubiquitin expression suppresses the cell cycle defect associated with the yeast ubiquitin conjugating enzyme, Cdc34 (UBC3). Evidence for a non-covalent interaction between Cdc34 and ubiquitin. J. Biol. Chem. 270: 9347-9352.
7. Levine, K., Huang, K. and Cross, F.R. 1996. *Saccharomyces cerevisiae* G_1 cyclins differ in their intrinsic functional specificities. Mol. Cell. Biol. 16: 6794-6803.
8. Blondel, M. and Mann, C. 1996. G_2 cyclins are required for the degradation of G_1 cyclins in yeast. Nature 384: 279-282.

SOURCE

Clb5 (Y-140) is a rabbit polyclonal antibody raised against amino acids 1-140 of Clb5 of *Saccharomyces cerevisiae* origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

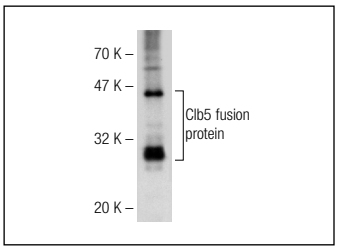
Clb5 (Y-140) is recommended for detection of Clb5 of *Saccharomyces cerevisiae* origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1–2 µg per 100–500 µg of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of Clb5: 50 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/ 2.0 ml).

DATA



Clb5 (y-140): sc-20170. Western blot analysis of yeast recombinant Clb5 fusion protein.

SELECT PRODUCT CITATIONS

1. Torres, M.P. and Borchers, C.H. 2007. Mitotic phosphorylation of the anaphase-promoting complex inhibitory subunit Mnd2 is necessary for efficient progression through meiosis I. J. Biol. Chem. 282: 17351-17362.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.